

Amendments to the Claims

Please amend claims 1, 5 and 7 as shown below.

Please cancel claims 2 and 6.

Listing of Claims

This listing of claims will replace all prior versions and listings of claims in the application:

1. (Currently Amended) A chemical mechanical polishing method comprising:
loading a semiconductor wafer in a wafer carrier;
rotating the semiconductor wafer in the wafer carrier in a first direction while a polished surface of the semiconductor wafer is maintained against a polishing pad which is rotating in a second direction, the second direction being opposite to the first direction; ~~and~~
reversing the direction of rotation of one of the wafer carrier and the polishing pad during a final polishing operation to remove embedded particles from the polished surface of the semiconductor wafer; and
while reversing the direction of rotation, spraying the polishing pad with a liquid to remove the particles from the polishing pad.

2. (Cancelled)

3. (Original) The method of claim 1 further comprising:
during a first processing phase, rotating the semiconductor wafer in the wafer carrier in a clockwise direction and rotating the polishing pad in a counter-clockwise direction for a predetermined period of time; and
during a second processing phase, rotating the semiconductor wafer in the wafer carrier in a counter-clockwise direction for a final polish duration.

4. (Original) The method of claim 1 further comprising:

during a first processing phase, rotating the semiconductor wafer in the wafer carrier in a counter-clockwise direction and rotating the polishing pad in a clockwise direction for a predetermined period of time; and

during a second processing phase, rotating the semiconductor wafer in the wafer carrier in a counter-clockwise direction for a final polish duration.

5. (Currently amended) A chemical mechanical wafer polishing system comprising:

a wafer carrier configured to retain a semiconductor wafer during a chemical mechanical polishing process;

a first drive system coupled with the wafer carrier to rotate the wafer carrier with the semiconductor wafer in one of a first rotational direction and a second, opposite, rotational direction;

a platen configured for mounting a polishing pad, the polishing pad polishing a surface of the semiconductor wafer when the wafer carrier and the platen are brought into proximity;

a second drive system coupled with the platen to rotate the platen and the polishing pad in one of the first rotational direction and the second rotational direction; and

a control system coupled with the first drive system and the second system to rotate the semiconductor wafer and the polishing pads in opposite directions during a first polishing interval and to reverse rotation of the semiconductor wafer relative to the polishing pad during a second polishing interval to remove embedded particles from the surface of the semiconductor wafer; and

a high pressure liquid spray system adjacent the polishing pad and positioned to spray liquid on the polishing pad to remove particles from the polishing pad.

6. (Cancelled)

7. (Currently amended) A chemical mechanical wafer polishing (CMP) system comprising:

wafer rotation means for rotating a semiconductor wafer in one of a first direction and a second direction in the CMP system;

a polishing pad to polish a surface of the semiconductor wafer;

pad rotation means for rotating the polishing pad relative to the rotation of the semiconductor wafer to produce chemical mechanical polishing of the surface of the semiconductor wafer; and

control means for controlling at least one of the wafer rotation means and the pad rotation means, the control means producing a first relative rotation during a first polishing duration and producing an opposite relative rotation during a second polishing duration to remove embedded particles from the surface of the semiconductor wafer.